USR-WIFI232-T/S/G2 FAQ

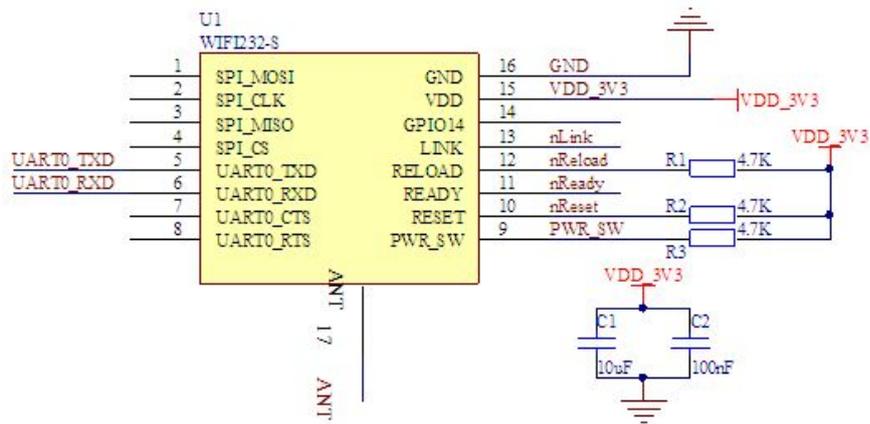## 1. USR-WIFI232 module peripheral circuit

See follow drawing

Requirements:

1. nReload, nReset, and PWR_SW pin must connect with pull up resistor, 5~10K is ok.

2. Power input must have filter capacitor, usually 10uF. Power voltage should be 3.0~3.6V. Current at least 300mA.

USR-WIFI232-S circuit
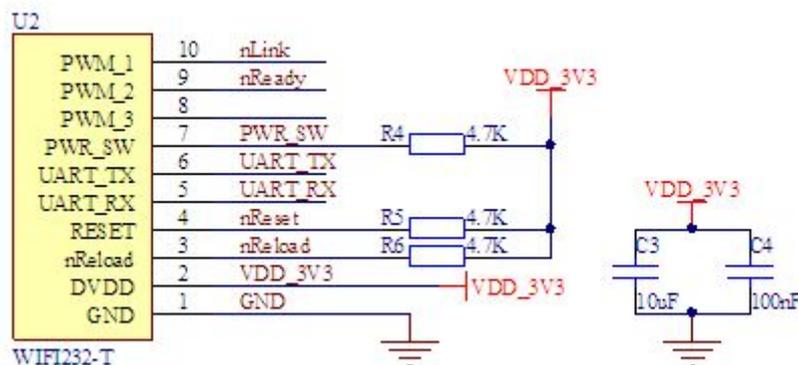
USR-WIFI232-T circuit
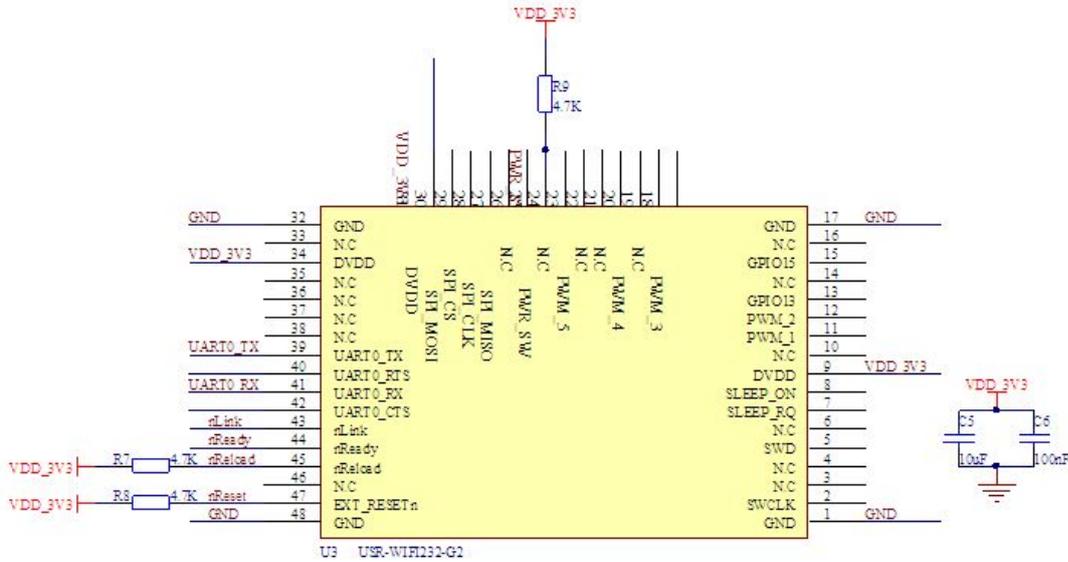
USR-WIFI232-G2 circuit

2. 5V MCU connect with 3.3V module circuit
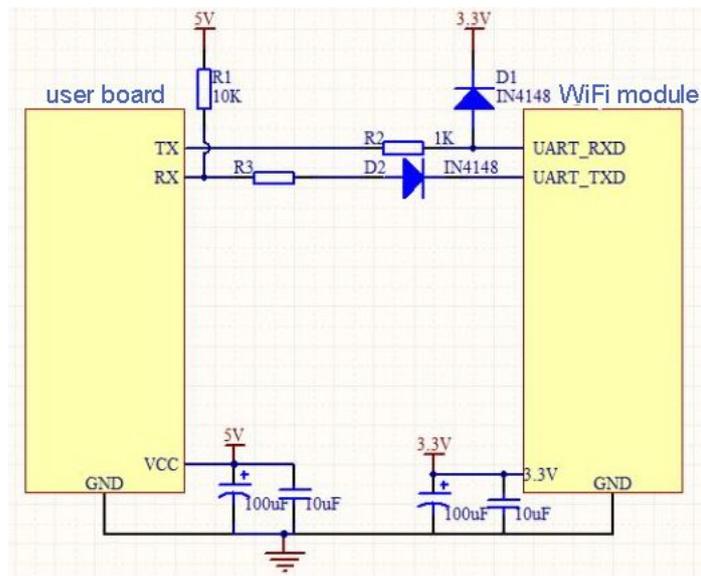
3. Design reference for USR-WIFI232-Sb antenna lead out

The antenna pin is used to lead out SMA connector, see below image.Need 50ohm impedance, this can be done by PCB manufacture, users should indicate the requirement in PCB design.
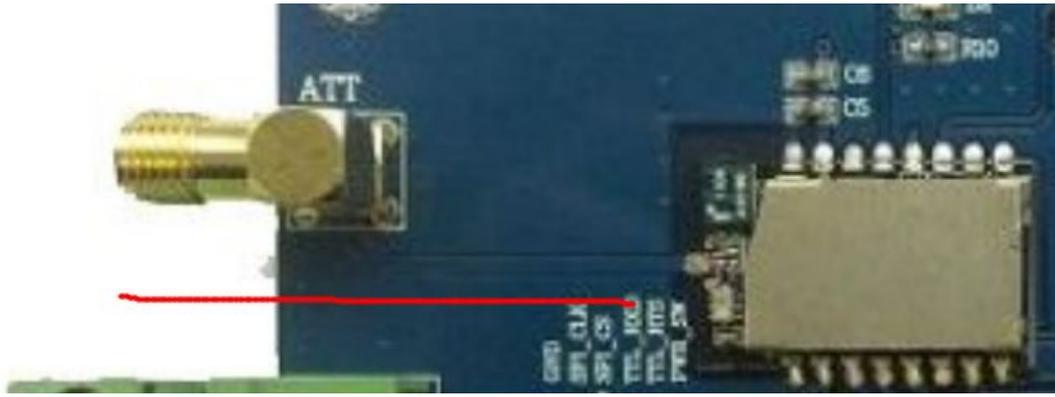
4. WIFI module power consumption details

WiFi Mode	Condition		Ave. Power (mW)	Ave. Current (mA)
STA	AP Associated No Data	20s After Bootup	87.33	26.54
		100s After Associated	43.37	13.18
	No AP Associated	First 20s	113.74	34.57
		First 100s	59.8	18.17
		First 10 minutes	45.11	13.71
	AP Associated	Date Rate:1KB/s	47.37	14.39
		Date Rate:5KB/s	163.19	49.59
		Date Rate:10KB/s	166.34	50.55
AP	Boot Up No Data	20s After Bootup	177.86	54.06
		100s After Bootup	178.86	54.36
	Data Tranmit	Date Rate:1KB/s	180.53	54.87
		Date Rate:5KB/s	182.23	55.39
		Date Rate:10KB/s	185.42	56.36
		Date Rate:10KB/s Dual-Direction	191.07	58.08
AP+STA	Boot Up No Data	20s After Bootup	167.409	50.73
		100s After Bootup	169.191	51.27
	Data Tranmit	Date Rate:1KB/s	170.445	51.65
		Date Rate:5KB/s	176.814	53.58
		Date Rate:10KB/s	184.635	55.95
		Date Rate:10KB/s Dual-Direction	186.912	56.64
Deep Sleep	Not supported yet, will be added future.			

5. Module can not start correctly

Phenomenon of problem: nready light is out, or nready pin is high level

1. Check module power, voltage should be 3.3±0.3V, current should be above 300mA

2. Check if the nReload and nReset pin connect to pull up resistor. This is necessary.

6. Unable to restore factory defaults after pressing nReload

1. Check if the nReload pin connect to pull up resistor. If didn't, connect with GND only can not realize factory defaults.

2. Communicate with module UART, switch to AT command mode, check if is "on" for AT+RLDEN. If it is not "on", send command AT+RLDEN=on

7. Can't get module SSID after power on

Checking steps:

1. Test if nReady pin is low level, test if the module start well. If did not start ok, see question5.

2. Restore factory defaults with nReload, to see if can get module SSID now.

3. Test module UART function, setup uart parameters first: baud rate 115200, 8 data byte, 1 stop byte. PC send +++ to module UART, to check if the module can reply a. If reply a, module switch into AT command mode, AT+WMODE to check working mode, no SSID in STA mode, this is normal. AT+WAP to check SSID.

4. If all failed, contact USR Technology for help.

8. How to set module(in STA mode) AP's SSID and password

3 method:

1. Webpage: Restore to factory defaults, module default in AP mode. User's PC or phone join module wifi network, log in built-in webpage to configure. Note: USR-WIFI232-S do not support webpage configuration.

2. AT command: AT+WMODE, AT+WSSSID, AT+WSKEY

3. Smart-link: we supply Android and IOS version app and user manual in CD.

4. WPS function

Smart-link and WPS will be much more convenient.

9. Get module wifi network but can't join it

1. For external version, make sure the antenna connection well.

2. Check if other STAs have join the network. In AP mode, 2 STAs can join, in AP+STA mode, only 1 STA can join.

10. How to use Smart-link function

Software and user manual in CD.

11. How to use WPS function

Press router WPS button, open router WPS function. Module open WPS function by button Then module will connect with router automatically.

12. Smart-link configuration failed

Smart-link configuration is not 100% successful. If your steps is correct but configuration failed, pls choose webpage configuration.

1. Support Primary router only, do not support secondary router.

2. With WPA2PSK and AES encryption, success rate is high.

3. Will failed if your phone does not support.

Below is the testing data:

No.	Router brand	P/N	Encryption												Distance between module and router (m)	Distance between module and phone (m)	Distance between module and phone (m)
			No	WEP		WPA PSK			WPA 2PSK			WPA PSK/WPA2PSK					
				Open	Share	TKIP	AES	TKIPAES	TKIP	AES	TKIPAES	TKIP	AES	TKIPAES			
1	TP-LINK	TL-WR340G+	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	/	5	2	5
2	DLINK	DL-850L	PASS	PASS	PASS	/	/	/	/	/	/	PASS	PASS	PASS	5	2	5
3	BUFFALO	WCR-GN	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	PASS	5	2	5
4	LINKSYS	WRT300N V1	PASS	PASS	PASS	PASS	/	/	/	PASS	/	/	/	PASS	5	2	5
5	LINKSYS	WRT54GS V.4	PASS	/	/	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	5	2	5
6	MERCURY	MW310R	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	PASS	PASS	/	5	2	5
7	Tenda	W304R	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	PASS	PASS	PASS	PASS	5	2	5
8	NETGEAR	JWNR2000v2	PASS	/	/	/	/	/	/	PASS	/	/	/	PASS	5	2	5
9	FAST	FWR310	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	5	2	5
10	net.core	NW755	PASS	PASS	PASS	/	PASS	PASS	/	PASS	PASS	/	PASS	PASS	5	2	5
11	LB-LINK	BL-841R	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	PASS	PASS	PASS	PASS	5	2	5
12	ASUS	RT-N12E	PASS	/	PASS	PASS	/	/	/	PASS	/	/	/	/	5	2	5
13	FEXUN	FWR-702E	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	/	/	/	5	2	5
14	BELKIN	F7D2301 V1	PASS	/	/	/	/	/	/	PASS	/	/	PASS	/	5	2	5
15	BELKIN	F9K1002V5	PASS	PASS	PASS	PASS	/	/	/	PASS	/	/	/	PASS	5	2	5

Instructions	
	PASS
	Qualified (contain ailures)
	FAILED
/	Router don't support this Encryption

Testing description:

1. Distance between phone and module is within 5m, distance between module and router is over 5m

2. Each testing is over 5 times, all succeed as PASS, fail 1-2 times as Qualified, others as FAILED

With router TP-LINK TL-WR340G:

No.	Phone brand	P/N	Encryption											
			No	WEP		WPA PSK			WPA 2PSK			WPA PSK/WPA2PSK		
				Open	Share	TKIP	AES	TKIPAES	TKIP	AES	TKIPAES	TKIP	AES	TKIPAES
1	HTC	T329D	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	/
2	HUAWEI	HUAWEIC8813Q	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	/
3	MEIZU.MX	M351	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	/
4	vivo	Y11iT	PASS	FAIL	FAIL	FAIL	FAIL	/	FAIL	FAIL	/	/	/	/
5	LG	nexus4	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	/
6	LG	nexus5	PASS	PASS	PASS	PASS	PASS	/	PASS	PASS	/	/	/	/

13. WPS configure failed

The same as Smart-link, WPS configuration is not 100% successful. If step is correct but failed, pls choose other method.

1. Your router should support WPS, some old router on the market do not support WPS function.

2. Support WPAPSK and WPA2PSK encryption only.

Testing data as follows:

(red)	connect failed
(gray)	connect succeed
(yellow)	when WPS on, router don't support this encryption

Router Name& P/N	Version	Signal strength	Connection times	Router encryption	Succeed times	Failed times	Notes
Mercury_MW305R	V1.0.03-2	70%-90%	10	WPAPSK	10		
				WPA2PSK	10		
LB-LINK_BL-841R	V1.0.03-2	70%-90%	10	WPAPSK		10	get SSID, but no password
				WPA2PSK	10		
D-Link_DIR-850L	V1.0.03-2	70%-90%	10	WPAPSK			when WPS on, router don't support WPAPSK encryption
				WPA2PSK	10		when WPS on, Router only support WPA2PSK-AES encryption
FeiXun_FWR-702E	V1.0.03-2	70%-90%	10	WPAPSK		10	
				WPA2PSK		10	
TP-LINK_TL-WR845N	V1.0.03-2	70%-90%	10	WPAPSK	10		when WPS on, Router only support WPAPSK-AES encryption
				WPA2PSK	10		when WPS on, Router only support WPA2PSK-AES encryption
HUAWEI_HG532d	V1.0.03-2	70%-90%	10	WPAPSK(NA)	NA	NA	when WPS on, Router don't support WPAPSK encryption
				WPA2PSK	10		
Cisco_CVR100W	V1.0.03-2	70%-90%	10	WPAPSK	10		
				WPA2PSK	10		
Net-coer_NW755	V1.0.03-2	70%-90%	10	WPAPSK	10		
				WPA2PSK	10		
ASUS-RT12E	V1.0.03-2	70%-90%	10	WPAPSK	0	10	
				WPA2PSK	0	10	
Belkin_F9K100V5	V1.0.03-2	70%-90%	10	WPAPSK(NA)	NA	NA	when WPS on, Router don't support WPAPSK encryption
				WPA2PSK	10		

14. Can't switch to AT command mode

Phenomenon of problem: input +++a, but module does not reply a

1. Make sure module start well. If indicate function is open, ready pin should be low. If it is high, pls refer to question 5.

2. Make sure UART settings are the same as PC. Including baud rate, data/parity/stop bit and hardware flow control. If you can not determine these settings, pls reload to factory defaults: 115200, N/8/1, no flow control.

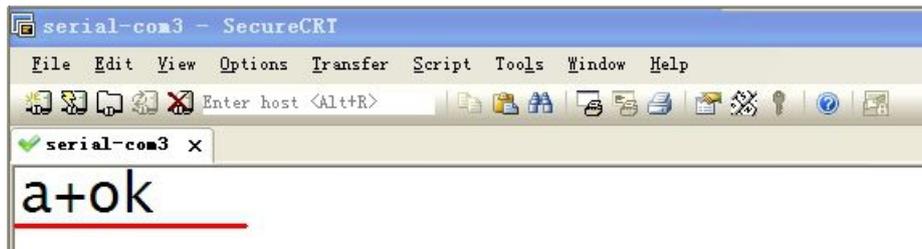3. If still not succeed, pls contact USR Technology for help.

15. How to switch Transparent mode and AT command mode

You can switch by AT command, also use AT+TMODE to set default work mode when start.
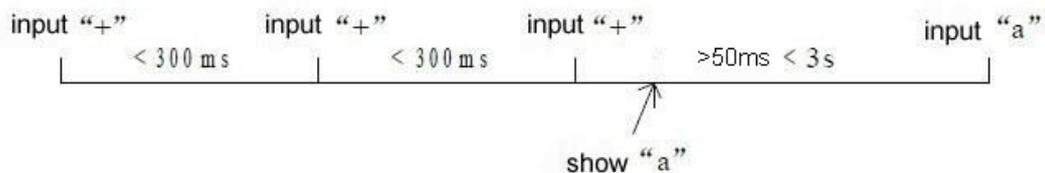
1. Transparent transmission mode to AT command mode

2 steps as follows:

➢ Input "+++", module will reply "a"

➢ Input "a", module will reply "+ok"

<Note>

➢ When input "+++"and "a", UART no response, as above picture.

➢ Input "+++" and "a" should be done in a certain period of time. See following time picture.

Remark: no need to add Enter key after +++ and a; besides, the time interval for characters before and after +++ should be over 50ms and within 3s.

2. AT command mode to Transparent transmission mode

Use AT+ENTM command

AT+ENTM

➢ Function: to transparent transmission mode

➢ Format:

AT+ENTM<CR>
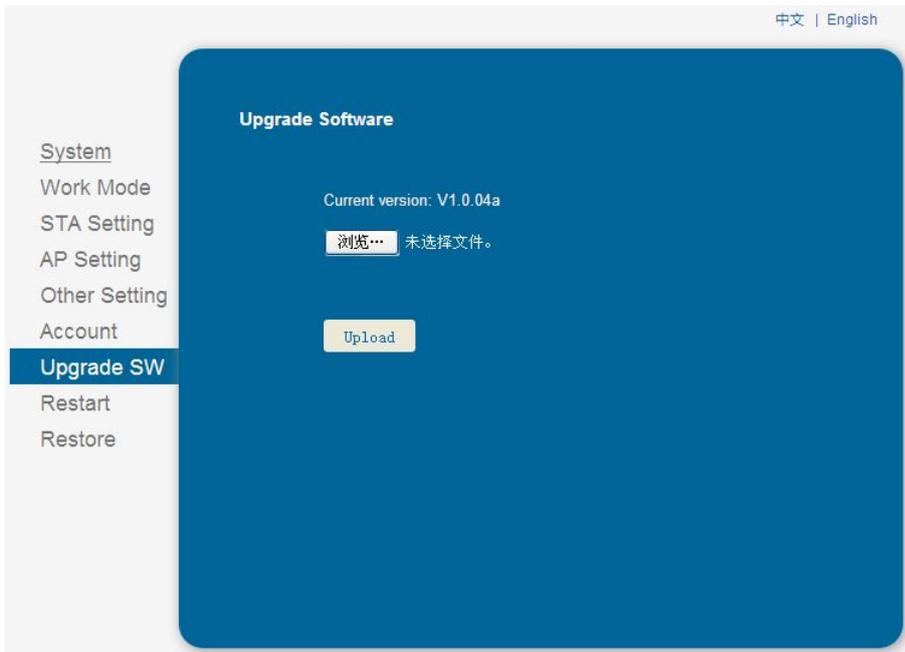
+ok<CR>< LF ><CR>< LF >

After this command, module will switch to transparent transmission mode.
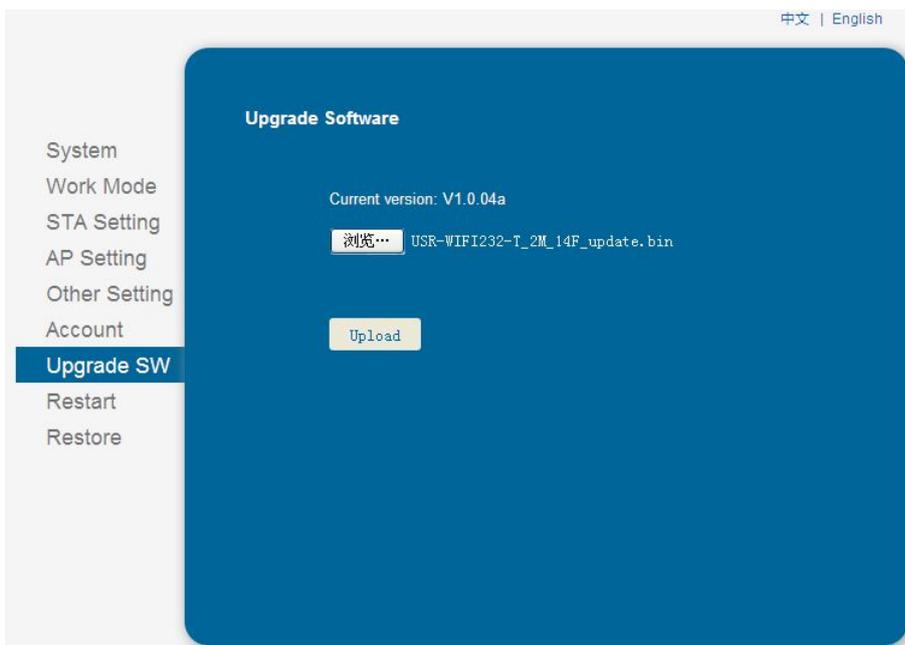
16. Upgrade by Webpage

Method 1

Note: USR-WIFI232-S does not support method 1

1. Log in built-in webpage. In AP mode, default 10.10.100.254; in STA mode, is assigned by your router. Default username and password: admin

2. Select Upgrade SW page

3. Choose firmware and Upload
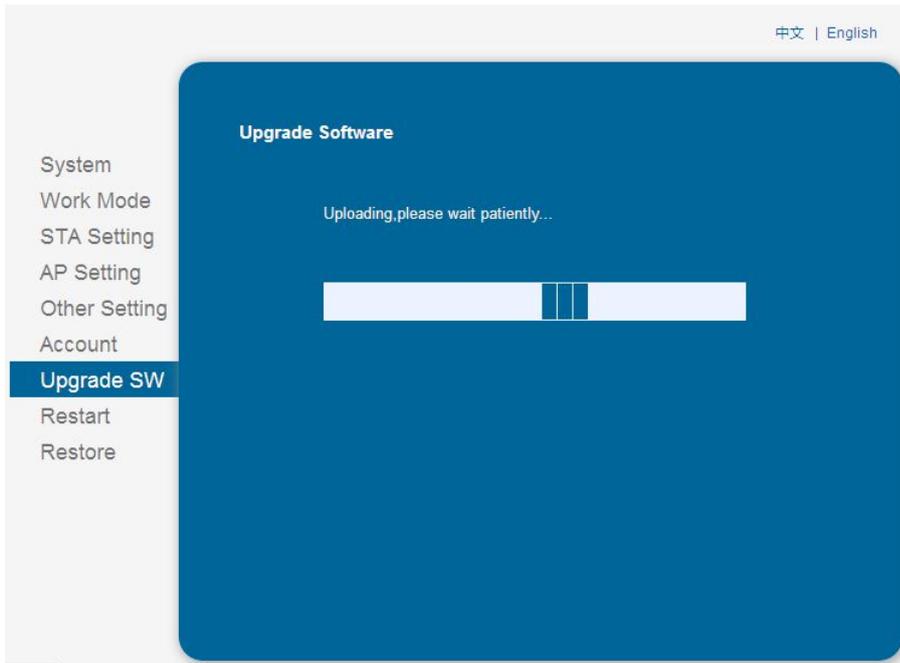
4. Will show as below picture if succeed

Method 2

1. Log in special upgrade interface. In AP mode: 10.10.100.254/iweb.html; in STA mode, it is IP address assigned by router+/iweb.html.

2. Choose the first part "Upgrade firmware", choose the firmware and click Upload.

3. Will show as below picture if succeed

17. Upgrade customized webpage

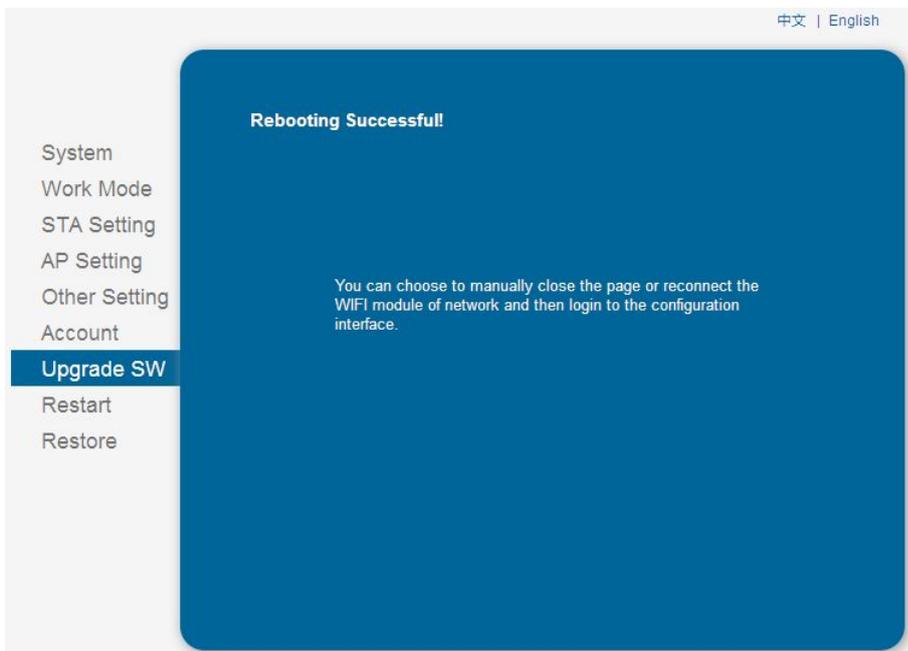1. Log in special upgrade interface. In AP mode: 10.10.100.254/iweb.html; in STA mode, it is IP address assigned by router+/iweb.html.

2. Choose the second part "Upgrade customized webpage", choose the firmware and click Upload.

3. Will show as below picture if succeed.
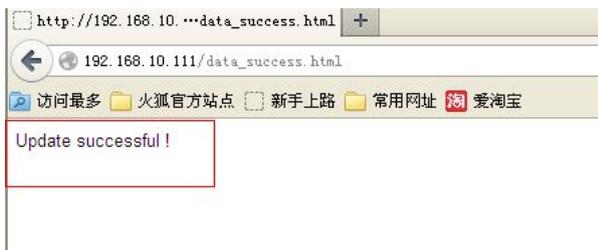
18. How to realize PWM/GPIO function

Different module pins are different, details pls see user manual chapter 4.1.3 and appendix B

1. Set module mode to pwm, use AT+TMODE=pwm, take effect after restart

2. Set module indicate function, use AT+LPTIO, take effect after restart

See below table for different module settings

Module	Function	AT+TMODE	AT+LPTIO
USR-WIFI232-S	GPIO/PWM	pwm	off
	Transparent transmission, nLink,nReady,WPS	throughput	lpt200
USR-WIFI232-T	GPIO/PWM	pwm	off
	Transparent transmission, nLink,nReady,WPS	throughput	on
USR-WIFI232-G2	GPIO/PWM	pwm	lpt200
	Transparent transmission, nLink,nReady,WPS	throughput	off

19. How to set module network connection parameters (Socket A and Socket B)

1. Two ways to set Socket A

   1) Use AT command: AT+NETP to set TCP server, TCP client, UDP server, UDP client
   AT+NETP
   - ➢ Function: Set/Query SOCKA network protocol parameters, Setting is valid after reset.
   - ➢ Format:
     - ◆ Query Operation:
       AT+NETP<CR>
       +ok=<protocol,CS,port,IP><CR>< LF ><CR>< LF >
     - ◆ Set Operation:
       AT+NETP=<protocol,CS,port,IP><CR>
       +ok<CR>< LF ><CR>< LF >
   - ➢ Parameters:
     - ◆ Protocol:
       - ● TCP
       - ● UDP
     - ◆ CS:
       - ● SERVER
       - ● CLIENT
     - ◆ Port: protocol port ID: Decimal digit and less than 65535.
     - ◆ IP: Server's IP address when module set as client.

     If set as UDP SERVER, the module will save the IP address and port of the latest UDP packet received. The data will be sent to the saved IP address and port. If the module hasn't saved any IP address and port when power up. The data will be sent to the IP address and port which is set by this command.
     If set as UDP CLIENT, the data will always be sent to the IP address and port set by this command.

   2) Use Webpage:

2. To set Socket B

Use AT command: AT+SOCKB

AT+SOCKB

> Function: Set/Query SOCKB network protocol parameters. Setting is valid after reset.
> Format:
◆ Query Operation:

AT+SOCKB<CR>

+ok=<protocol,port,IP><CR>< LF ><CR>< LF >

◆ Set Operation:

AT+SOCKB=<protocol,port,IP><CR>

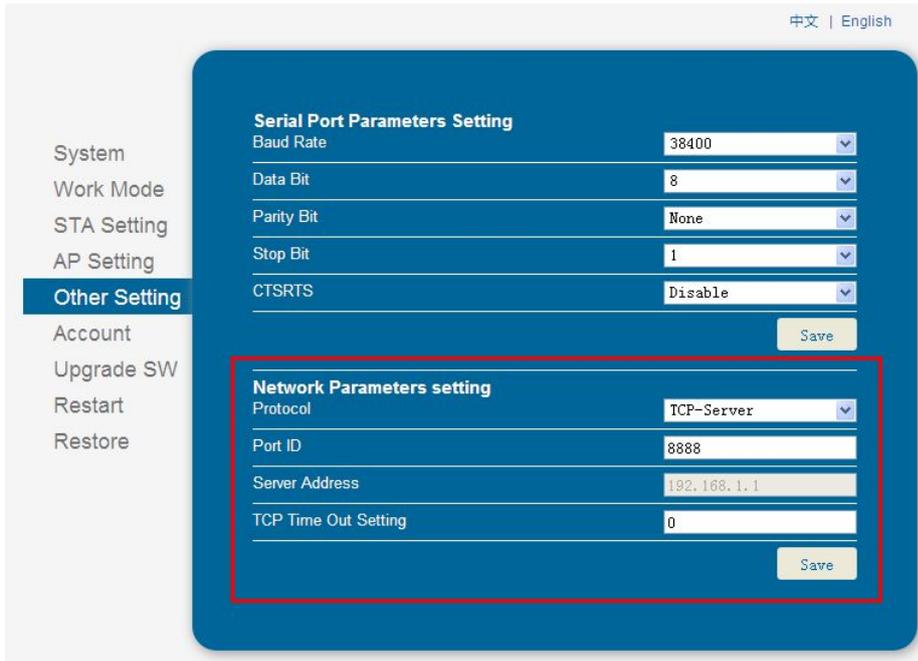**+ok<CR>< LF ><CR>< LF >**

> Parameters:
◆ Protocol:
● TCP: Only for TCP Client;
● UDP: UDP Client
● UDPS: UDP Server
◆ Port: Protocol Port in decimal, less than 65535;
◆ IP: Destination IP address, domain name is support;

If set as UDP SERVER, the module will save the IP address and port of the latest UDP packet received. The data will be sent to the saved IP address and port. If the module hasn't saved any IP address and port when power up. The data will be sent to the IP address and port which is set by this command.

If set as UDP CLIENT, the data will always be sent to the IP address and port set by this command.

20. How does the module connect to 2 different network

Module has two channel Socket A and Socket B. To set these parameters is ok. Refer to question 19.

21. How to distinguish data from Socket A or Socket B

In transparent transmission, module can not distinguish data from Socket A and Socket B. Data received from UART will be sent to Socket A and Socket B at the same time. As well, no matter the data is received by Socket A or Socket B, module will send to UART without any distinguish.

If users need to distinguish data from Socket A and Socket B, pls refer to question 22&23.

22. How to send data to Socket A only

To send data to socket A only, module should be in AT command mode, use AT+SEND and AT+RECV, see details:

AT+SEND
  ➢ Function: Send Data to SOCKA at Command Mode.
  ➢ Format:
  AT+SEND=<data_lenth><CR>
  +ok<CR>< LF ><CR>< LF >
  ➢ Parameters:
  ◆ data_lenth: Lenth of send data. Range: 0~1000 Byte
  The UART port will feedback a '>' and then wait 3 seconds for input after this command is sent OK. The data received from UART port is sent to SOCKA. If the interval of two bytes is more than 10ms, the data will be sent instantly.

AT+RECV
  ➢ Function: Receive Data from SOCKA at Command Mode;
  ➢ Format:
  AT+RECV=<data_lenth><CR>
  +ok=< data_lenth, data_content><CR>< LF ><CR>< LF >
  ➢ Parameters:
  ◆ data_lenth: Lenth of receive data. Range: 0~1000 Byte;
  ◆ data_content: contents of receive data.
  If not receive any data in 3 second, then feedback +ok=0.

From above command we can see this way has strict request for time

23. How to send data to Socket B only

Similar to socket A, use AT command AT+SNDB and AT+RCVB
AT+SNDB
  ➢ Function: Send Data to SOCKB at Command Mode.
  ➢ Format:

AT+SNDB=<data_lenth ><CR>

+ok<CR>< LF ><CR>< LF >

- ➢ Parameters:
  - ◆ data_lenth: Lenth of send data. Range: 0~1000 Byte;

  The UART port will feedback a '>' and then wait 3 seconds for input after this command is sent OK. The data received from UART port is sent to SOCKA. If the interval of two bytes is more than 10ms, the data will be sent instantly.

AT+RCVB

- ➢ Function: Receive Data from SOCKA at Command Mode;
- ➢ Format:

  AT+RCVB=<data_lenth><CR>

  +ok=< data_lenth, data_content><CR>< LF ><CR>< LF >

- ➢ Parameters:
  - ◆ data_lenth: Lenth of receive data. Range: 0~1000 Byte;
  - ◆ data_content: contents of receive data.

    If not receive any data in 3 second, then feedback +ok=0

From above command we can see this way has strict request for time

24. How to use DNS instead of IP when set network parameters

Users can use DNS to replace IP address.

Assume that we set to connect to baidu server, server IP is 61.135.169.105, port 80, then socket A settings as follows:

By IP: AT+NETP=TCP, client, 80, 61.135.169.105

By DNS: AT+NETP=TCP, client, 80, www.baidu.com

25. To switch TCP connection target without reset

Assume that, previous TCP client destination IP and port: 192.168.1.1, 9000, need set to be 192.168.1.88, 8899. Steps as follows:

Step 1. Send +++ a

  To AT command mode

Step 2. AT+TCPDIS=off

  Close previous TCP connection

Step 3. AT+NETP=TCP,client,8899,192.168.1.88

  Change TCP client destination IP and port

Step 4. AT+TCPDIS=on

  Open TCP connection

Step 5. AT+TCPLK

  Check if the TCP connection succeed; if not, need to wait

Step 6. AT+ENTM

To transparent transmission mode

Step 7.   Send data

Send any data

Step 8.   Receive data

Receive data you sent

Step 9.   Send +++ a

To AT command mode

Step 10.   AT+TCPDIS=off

Close TCP connection

Step 11.   AT+ENTM

To transparent transmission mode

26. Can't establish stable TCP connection with PC or phone

To check module power voltage and current. Voltage should be 3.3±0.3V, current should be above 300mA. If the power is not enough or stable, TCP connection will not be stable.

27. Can't connect to module TCP server

1. Check if the module start well, refer to question 5. Make sure power is enough, if not, module will restart when create TCP connection, so it may be failed.

2. Check how many TCP clients have connect to TCP Server, max 5 TCP connection

3. To confirm if transmission well by AT command: send +++, if reply a

4. If UART well, to check if the module is in TCP Server, port 8899, use AT+NETP

28. TCP connection unstable (applicable to UDP)

Two phenomenon for unstable module:

Module in TCP Server, PC or phone as TCP Client to connect to TCP Server, after a period of time, TCP connection will disconnect.

Module in TCP Client, PC as TCP Server, often see TCP client access, disconnect, can't keep stable connection.

Reason:

Possible 1

Usually caused by unstable power, unstable voltage or insufficient current. Usually appears when power by USB, suggest to check or change voltage. Refer to question 5. This reason usually applicable to UDP unstable problem.

Possible 2

Module TIMEOUT settings. Socket A use AT+TCPTO command or webpage, Socket B use AT+TCPTOB. TCP connection disconnect is similar to timeout, maybe caused by time out, pls change and test again.

29. TCP Timeout

This is the time that PC does not receive any data.

30. TCP server dead links handling

Module in TCP server, if TCP Client did not disconnect correctly, will generate TCP server dead links. The way to remove TCP dead links is by timeout mechanism, that is to say, all TCP connections will be off in a certain period of time.

31. How to use HTTP protocol

Make sure module in STA mode, join in router, can get access to the Internet
We assume to access to this address: http://community.thingspeak.com/blog/news/

Use AT+HTTPURL set host: http://community.thingspeak.com:80
    Format: AT+HTTPURL=http://community.thingspeak.com,80
Use AT+HTTPPH set local: /blog/news/
Format: AT+HTTPPH=/blog/news/
Use AT+HTTPCN set connection method: keep-alive
    Format: AT+HTTPCN= keep-alive
Use AT+HTTPUA set user-agent: according to you, here we set www.usr.cn
    Format: AT+HTTPUA=www.usr.cn
Use AT+HTTPTP set request mode: GET or POST
    Format: AT+HTTPTP=GET
Use AT+HTTPDT send request or data:
    1. Use GET, no need to send data
Format: AT+HTTPDT
    2. Use POST, send data, assume 123
        Format: AT+HTTPDT=123

```
AT+HTTPURL=http://community.thingspeak.com,80
+ok

AT+HTTPPH=/blog/news/
+ok

AT+HTTPUA=www.usr.cn
+ok

AT+HTTPTP=GET
+ok

AT+HTTPDT
HTTP/1.1 200 OK
Date: Mon, 20 Jan 2014 00:53:24 GMT
Server: Apache
Last-Modified: Fri, 26 Apr 2013 00:51:54 GMT
Accept-Ranges: bytes
Content-Length: 76
Vary: Accept-Encoding
Keep-Alive: timeout=5, max=100
Connection: Keep-Alive
Content-Type: text/html

<!-- pageok -->
        <!-- managed by puppet -->
                <html>
                    <pre>pageok</pre>
                        </html>
+ok
```

32. How to change module factory settings

Use AT command AT+CFGTF to save current parameters as factory defaults

Steps as follows:

1. Set module parameters by AT command. Need to set all parameters, to avoid missing and incorrect factory settings.

2. Send AT+CFGTF to save current settings.

Besides, USR Technology can supply software for configuration

33. If the settings will be saved if power down

For parameters that module set, can be saved when power down, no need to set again. But data will loss after reload. If need to set factory defaults, pls refer to question32.

34. How to send by UDP broadcast

Both Socket A and Socket B can support UDP transmission. In UDP client mode, can send UDP broadcast.

Method: set UDP client destination IP to be 255.

Example: send broadcast in 192.168.1.* segment, port 9000, AT command see follows:

Socket A: AT+NETP=UDP, client, 9000, 192.168.1.255

Socket B: AT+SOCKB=UDP, client, 9000, 192.168.1.255

35. Max transmit frequency

Max transmit frequency is 200ms per time. That is to day, the interval between two transmission should be above 200ms. Or data packages will be sent at a time.

36. Module MAX transmit rate and amount

Module transmit rate is related to baud rate and network status. If network well, transmission speed is limited by COM buad rate. Commonly used baud rate is 115200, rate is about 10k/s. Max baud rate is 460800, rate is about 46k/s.

There is no limitation about data amount, can keep transmitting. But as the UART and NET transmit speed is different, may cause data congestion and data loss. Data buffer is 1K, so we suggest you send data within 1K at a time. Data will loss if over 1K. If users usually send large amount of data, we recommend module USR-WIFI232-A/B/C.

37. AT+WSKEY command for router(To set mixed encryption)

When set router password, AT command format:

AT+WSKEY

➢ Function: Set/Query STA security parameters. Setting is valid after reset.

➢ Format:

◆ Query Operation:

AT+WSKEY<CR>

+ok=<auth,encry,key><CR>< LF ><CR>< LF >

◆ Set Operation:

AT+ WSKEY=< auth,encry,key><CR>

+ok<CR>< LF ><CR>< LF >

➢ Parameters:

◆ Auth: Authentication mode

● OPEN

● SHARED

● WPAPSK

● WPA2PSK

◆ Encry: Encryption algorithm

● NONE: When "auth=OPEN", effective

● WEP-H: When "auth=OPEN" or "SHARED", effective，HEX format

● WEP-A: When "auth=OPEN" or "SHARED", effective，ASCII format

● TKIP: When "auth= WPAPSK" "WPA2PSK", effective

● AES: When "auth= WPAPSK" "WPA2PSK", effective

◆ Key: password, when encry = WEP-H, the password is the hexadecimal number, must be 10 byte or 26 byte; When encry = WEP-A, the password is the ASCII code, must be 5 byte or 13 byte; other ASCII code, shall less than 64 byte and greater than 8 byte.

1. WEP password has Hex and Ascii format, pls choose WEP-H or WEP-A according to content:
   WEP support 64 and 128 bit encryption, for 64 bit encryption,the key is 10 Hex characters (0-9 and A-F) or 5 ASCII characters;
   For 128 bit encryption, key is 26 Hex characters or 13 ASCII characters
2. WPAPSK/WPA2PSK mixed encryption choose WPA2PSK
3. TKIP/AES mixed encryption choose AES

38. Module frozen when transmit data(data above 100 byte)

In transmission, if the data contain 100 "0", module will be frozen. This is limited by chip mechanism, users should try to avoid the 100 "0".